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IN THE

# Supreme Court of the United States

OCTOBER TERM, 1957

No. 654

JIM BROWN HOLLIDAY and HARRINGTON MANUFACTURING COMPANY, INC., *Petitioners*

v.

LONG MANUFACTURING COMPANY, INC., LONG TOBACCO HARVESTING COMPANY, INC., and WILLIAM R. LONG, *Respondents*

**PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT**

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## PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

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Jim Brown Holliday and Harrington Manufacturing Company, Inc. (plaintiffs-appellees below), petition this Court for a writ of certiorari to review the judgment of the United States Court of Appeals for the Fourth Circuit in the matter here involved.

### OPINIONS BELOW

The District Court opinion is reported at 146 F. Supp. 527 (111 U.S.P.Q. 436). The Court of Appeals opinion is reported at 246 F. 2d 95 (114 U.S.P.Q. 4). Copies of the opinion are appended hereto.

## JURISDICTION

The decree of the Fourth Circuit Court of Appeals was both dated and entered on May 27, 1957.

The time for filing a petition for rehearing was, on June 21, 1957, extended twenty days beyond June 26, 1957.

A petition for rehearing was filed on July 13, 1957, and order denying rehearing was both filed and entered on September 13, 1957.

The jurisdiction of this Court is invoked under 28 U.S.C. Sec. 1254(1).

## QUESTION PRESENTED FOR REVIEW

This is a patent infringement action involving a tobacco harvester. The District Court, with an earthy, practical Judge who knew the people, the problem, and the history, and understood tobacco farming and harvesting (and the aching backs that result from it) spent many days on this lawsuit, heard numerous witnesses, went and looked at the machines involved, and finally determined that the patent was a pioneer patent, and was valid, and was infringed. In this, his judgment agreed with that of the United States Patent Office both as to the patentability of the device, and more specifically as to the construction of the single claim here involved. This construction turned on one word, "vertical", which both the District Judge and the United States Patent Office construed with reasonable liberality, basing this construction upon the facts of the case. There was much testimony about what this word meant and why.

The Court of Appeals on an abbreviated record, which its rules and practice effectively urge upon the

appellants in place of a full record, and after a half hour argument, much of it consumed by questions by the Judges, brushed aside the District Court's findings as to infringement, wrote an opinion that shows a lack of understanding of the facts of the case, and ended by construing "vertical" so absolutely literally as to make the important patent here in suit entirely valueless.

The question involved is whether or not this Court of Appeals is to be permitted to ignore well-supported findings of fact of the District Court despite FRCP 52(a). If it is, we might as well take depositions of witnesses and submit cases directly to the Court of Appeals. The District Court will have lost its purpose. Furthermore, the construction placed on the instant patent claim by the Court of Appeals is so ridiculously narrow as to amount to a nullification of the protection which a patent is supposed to afford.

**FEDERAL RULES OF CIVIL PROCEDURE, RULE 52(a)**

FINDINGS BY THE COURT

(a) *Effect.* In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclusions of law thereon and direct the entry of the appropriate judgment; and in granting or refusing interlocutory injunctions the court shall similarly set forth the findings of fact and conclusions of law which constitute the grounds of its action. Requests for findings are not necessary for purposes of review. Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses. The findings of a master, to the extent that the court adopts them, shall be considered as the findings of the court. If an opinion or memorandum of de-

cision is filed, it will be sufficient if the findings of fact and conclusions of law appear therein. Findings of fact and conclusions of law are unnecessary on decisions of motions under Rules 12 or 56 or any other motion except as provided in Rule 41(b). As amended Dec. 27, 1946, eff. March 19, 1948.

* * * * * * * *

## STATEMENT OF THE CASE

This litigation began when Jim Brown Holliday and the Harrington Manufacturing Company, Inc., sued the Long Manufacturing Company, Inc., and others for infringement of United States Letters Patent 2,672,248 granted to Holliday for an improvement in tobacco harvesters. Harrington Manufacturing Company, Inc., is Holliday's licensee.

Long Manufacturing Company, Inc., and others countered with a suit against Harrington Manufacturing Company, Inc., and Jim Brown Holliday for infringement of a later issued patent to Long, No. 2,704,158.

The two actions were tried simultaneously. Both patents were held to be *valid* and *infringed* but the District Court Judge pointed out that the Holliday patent was a pioneer patent, whereas the Long patent related to a rather minor improvement. The District Court opinion states the facts quite well and there is no reason to repeat them here.

On concurrent appeals to the Fourth Circuit Court of Appeals, the Court of Appeals reversed the District Court as to infringement of the Holliday patent, holding the patent to be valid but "a narrow combination or paper patent" and entitled to so little scope as to make it completely valueless.

A petition for rehearing was filed as to the holding relative to the Holliday patent but this petition was denied.

The petition for certiorari has been taken from the decision in the *Holliday et al* v. *Long Manufacturing Company, Inc., et al* case (No. 7383 in the Court of Appeals and No. 340 in the District Court) and not from the case relative to the Long patent, (No. 7384 in the Court of Appeals and No. 350 in the District Court). Thus, there will appear in the appended decisions certain references to the Long patent 2,704,158 and the infringement of that patent by the machine manufactured by the Harrington Manufacturing Company, Inc., which references have no pertinence here. We are here concerned only with the scope accorded to the Holliday patent.

The District Court found that the Holliday invention was pioneer in nature and that claim 7 was entitled to a liberal construction and that the Long machine embodied the fundamentals of the Holliday machine as defined in claim 7. This finding was based on the testimony of a number of witnesses relative to the history of tobacco harvesting and the benefits that accrued and might reasonably be expected to accrue from the use of the Holliday machine. It was also based on the Patent Office record of the application for the Long patent, in which the Patent Office indicated that it did not consider the word "vertical" to be a material limitation in claim 7 of the Holliday patent (Joint Appendix below 11a). It was also based on the somewhat conflicting testimony of two patent experts, one of whom clearly testified that the word was entitled to the broader interpretation. It was also based on the District Court's correct understanding of

the fact that Jim Brown Holliday built and tested a machine that embodied the fundamental concept more than a year prior to the time that Long built a machine, and petitioners believe that the District Court took into consideration the fact that Long and Holliday lived in the same part of North Carolina and that Long was in the business of manufacturing agricultural machines, and that it would be likely that Long would either directly or indirectly know of Holliday's work.

The Court of Appeals, without seeing or hearing witnesses and without properly understanding the facts, brushed all this aside and held the Holliday patent to be a "narrow combination or paper patent" and limited so strictly as to be valueless, merely because Long was the first to commercialize the device, and probably partly because Harrington Manufacturing Co. (not the inventor Holliday who will suffer most by the Court of Appeals decision) copied certain minor features from Long. The Court of Appeals was plainly wrong as to several important facts as will appear.

**(a) Findings of Fact of District Court Reversed by Court of Appeals**

At this point this Court's attention is directed to what was found to be facts by the District Court and the position taken by the Court of Appeals in brushing aside the findings of the District Court. The District Court found that in claim 7 the word "vertical" was a random adjective chosen to describe the then existing form of the Holliday invention, and that Hollday's history in the Patent Office indicated that he was under no compulsion to word his claim as was done. (Appendix this Petition 8a). The Court of Appeals in holding that claim 7 was not infringed by Long held

that the word "vertical" could not be construed as a random adjective (Appendix this Petition 21a) and that Holliday was compelled to word his claim as was done in the Patent Office (Appendix this Petition 22a).

The District Court in determining that claim 7 of the Holliday patent was infringed found that in the Long machine the pertinent frame members and pertinent stretches of the conveyor chains, while not truly vertical, were substantially vertical (Appendix this Petition 7a). The District Court further found that any variations as between the Long machine and the machine illustrated in the Holliday patent were of no consequence insofar as functional purposes were concerned (Appendix this Petition 10a). The Court of Appeals in holding that the Long machine did not infringe claim 7 of the Holliday patent took the position that the conveyor system of Long was substantially different in design and arrangement from that defined by claim 7 of the Holliday patent (Appendix this Petition 24a.

The District Court found that the most recent model of the Long machine had long stretches of *vertical* chains and also *vertical* seat supports (Appendix this Petition 11a). The Court of Appeals paid no attention whatsoever to any form of the Long machine, except the machine shown in the Long patent; yet the record shows three different forms of the Long machine (Joint Appendix below 6a, 21a, 42a).

The District Court found that the Holliday invention was a pioneer invention entitled to a broad range of equivalents (Appendix this Petition 6a), that the Holliday patent was not limited to coverage of replicas of his original embodiment of the invention, that form

was not the essence of the Holliday invention (Appendix this Petition 8a) and that the Long Construction was the equivalent of the machine illustrated in the Holliday patent (Appendix this Petition 10a). The Court of Appeals held that the Holliday invention was not a pioneer invention (Appendix this Petition 22a), that the Holliday patent was a narrow combination or paper patent, and that Long's machine was not the equivalent of the construction defined by claim 7 of the Holliday patent (Appendix this Petition 24a).

Further, the District Court made no finding to the effect that Long knew nothing of the Holliday machine before he developed his invention, and the District Court made no finding that Holliday copied the Long machine. However, the Court of Appeals held that Long knew nothing about Holliday's work and apparently took nothing from Holliday, and the Court of Appeals styled Holliday as the copyist and Long as the effective innovator (Appendix this Petition 25a). These findings by the Appellate Court apparently were based on the observation of the Appellate Court that Long's machine was tested in the field "10 days *after* Holliday's first test of his machine" (Appendix this Petition 20a—Emphasis ours) and the Appellate Court's erroneous conclusion that Holliday learned of the Long machine prior to its public demonstration in September, 1953, due to the fact that Holliday had talked with Davis, Long's Chief Engineer, and obtained pictures of the Long machine from him. However, the District Court found that in 1952, more than a year before Long tested his machine in the field (and at least a year before Long began to construct any type of tobacco harvester), Holliday actually constructed and tested a tobacco harvester like the patented machine except that the conveyor chains in the 1952 harvester

were manually operated (Appendix this Petition 3a). Further, the record shows plainly that Holliday *did not* talk with Davis, the chief engineer of Long, until *after* the public demonstration of the Long machine in September, 1953 (Joint Appendix below 30, 38).

## BASIS OF FEDERAL JURISDICTION IN FIRST INSTANCE

This is a patent infringement action, originally brought in the District Court for the Eastern District of North Carolina, Washington Division, where the defendants are domiciled and where the alleged infringement was and is occurring. Jurisdiction and venue are in accordance with 28 U.S.C. 1338(a), 1400(b).

## ARGUMENT AMPLIFYING REASONS FOR ALLOWANCE OF WRIT

### The Court of Appeals Was Clearly Wrong and in Direct Conflict with the Applicable Decisions of This Court and F.R.C.P. 52(a) in Reversing the Fact Finding of the District Court, Based on Substantial Evidence, that the Holliday Patent Was for A Pioneer Invention.

The District Court's finding that the Holliday patent related to a pioneer invention was based on the testimony of Jim Brown Holliday and William R. Long, the newspaper reactions to the first successful operation of the Holliday tobacco harvester, the obvious lack of success of prior tobacco harvesters, a direct viewing of the tobacco harvesters involved by the District Court Judge, and probably to some extent, which we shall never be able to determine, upon the knowledge of the Judge himself, since he is a native of the tobacco country and knew the problems of tobacco harvesting firsthand.

With all this background and all this specific testimony, the District Judge was peculiarly well qualified

to make the decision as to whether or not the Holliday contribution was in fact a pioneer invention. Certainly, Jim Brown Holliday testified that it was, certainly the Patent Office granted the patent on it, certainly the newspapers gave it considerable favorable publicity at the time of its first successful operation, and in view of these facts the Court of Appeals could not possibly, within the bounds prescribed by F.R.C.P. 52(a) have reversed this fact finding. To do so was to substitute uninformed judgment for informed judgment and to make the Court of Appeals a super tryer of facts rather than a Court of legal review.

**The Court of Appeals Was Clearly Wrong and in Direct Conflict with the Applicable Decisions of This Court and F.R.C.P. 52(a) in Reversing the Fact Finding of the District Court, Based on Substantial Evidence, that the Word "Vertical" Was Used in the Holliday Patent Claim 7 as "A random Adjective Chosen to Describe the Then Existing Form of Tobacco Harvester". Similarly, the Court of Appeals Was Clearly Wrong in Overruling the Finding of the District Court that "Form Is Not the Essence of Holliday's Invention."**

The District Court, in finding that the term "vertical" was "a random adjective chosen to describe the then existing form of the tobacco harvester" and in finding that "Form is not the essence of Holliday's invention", did so as a matter of fact and upon evidence from the Patent Office records showing clearly that the Patent Office did not consider the word "vertical" to be a vital limitation and upon the testimony of Jim Brown Holliday as to what he considered his invention to be, and upon the testimony of Walter Roe, a former patent examiner of long experience who testified as to the proper meaning to be attributed to the word "vertical", and as to the fact that form was not the essence of the invention of the Holliday patent.

The District Court also had before it the testimony of William R. Long, one of the defendants, to the effect that the Holliday device and the Long device accomplished much the same purpose in much the same way and had many of the same components arranged in many respects alike. The District Court further had before it the testimony of defendants' expert, W. W. Cochran, who attempted to testify that the word "vertical" should be construed very strictly and that the specific form of Holliday's invention was the essence of his patent.

With this conflicting testimony, the District Court having seen and heard the witnesses, determined that form was not the essence of Holliday's invention and that the word "vertical" should not be strictly and literally construed. Furthermore, the District Court determined that for all intents and purposes the Long construction was fully equivalent to the Holliday construction. Reversal of this fact finding is again clearly beyond the proper function of the Court of Appeals.

**The Fourth Circuit Court of Appeals Has Shown A Rather Pronounced Tendency to Disregard F.R.C.P. 52(a)**

The practice of the Fourth Circuit Court of Appeals is to have only the necessary parts of the record printed and these printed as appendices to the brief. The Court is known to have a distaste for unnecessarily lengthy appendices, and hence counsel quite reasonably printed sufficient of the testimony in the District Court to suport the District Judge's findings, but omitted a great deal of cumulative evidence, and pointed out Rule 52(a) to the Court.

Once counsel for petitioners recovered from the shock of the Court of Appeals' decision, they began to

look around at the other recent decisions of this same Court of Appeals, and they almost immediately noted some interesting facts. In several other recent cases, among them the case of *Rohm & Haas Company* v. *Roberts Chemicals, Incorporated* (D.C. dec. 142 F. Supp. 499, C.A. dec. 245 F. 2d 693) and in the case of *Sears Roebuck and Company* v. *Minnesota Mining Company* (D.C. dec. 141 F. Supp. 686, C.A. dec. 243 F. 2d 136), this same Court also reversed the lower court by brushing aside the findings of fact of the lower court with apparently very little consideration being given to the fact that the lower court had before it the witnesses and a more complete record.

This caused counsel to wonder if the Fourth Circuit Court of Appeals really had a proper appreciation of F.R.C.P. 52(a) and accordingly counsel made a search through the last ten years of decisions in the Federal Rules Decisions to find out how often the Fourth Circuit Court of Appeals had cited Rule 52(a). It turned out that the average number of times that Rule 52(a) had been cited in all circuits, including the District of Columbia circuit, was 44 times per circuit in the ten years. In the Fourth Circuit Court of Appeals it was cited only 17 times and of these 17 times, 5 times were citations by the District Courts.

Counsel appreciates that this is far from conclusive as an indication that the Fourth Circuit Court of Appeals does not have a proper appreciation of Rule 52(a) and appreciates that they cannot in this petition argue the *Rohm and Haas* or *Minnesota Mining* cases. They earnestly believe, however, that a reading of the decisions in these other cases, and a reading of the decisions in the present case will show what is attempted to be emphasized here. In substance, counsel

believes the Fourth Circuit Court of Appeals has so far departed from the accepted and usual course of judicial proceeding as to call for the exercise of the Supreme Court's power of supervision.

This Court has emphasized F.R.C.P. 52(a), and the decision of the Fourth Circuit Court of Appeals is therefore in conflict with such applicable decisions of this Court as: *Graver Tank & Mfg. Co.* v. *Linde Air Products Co.*, 336 U.S. 271, 69 S. Ct. 535, 93 L. Ed. 672 (1950); *Graver Tank & Mfg. Co.* v. *Linde Air Products Co.*, 339 U.S. 605, 70 S. Ct. 854, 94 L. Ed. 1097 (1950).

In the Graver Tank case (there were two decisions by this Court, the second decision relating to a rehearing limited to the matter of infringement and the application of the doctrine of equivalents), the trial Court had held four of the claims valid and infringed, but held other claims involved to be invalid. The Court of Appeals, while affirming the trial court on the claims held to be valid, overruled the trial court on the holding of invalidity. This Court, after citing rule 52(a) and pointing out its peculiar applicability to a patent case, overruled the Court of Appeals insofar as that Court had overruled the findings of the trial Court. It would seem that the corollary to this Court's decision in the Graver Tank case is that when the trial Court finds that *infringement* exists, the Court of Appeals should give due consideration to Rule 52(a) and that the findings of the trial Court should prevail, unless clearly erroneous.

The second decision of this Court in the Graver Tank case (See 339 U.S. 605, 609, 611, 612 70 S. Ct. 854, 855, 858) is apropos to the case at bar. This Court pointed out that a finding of equivalance is a determination

of fact and that it was not the province of this Court to "essay an independent evaluation of this evidence" and went on to point out that, where the trial Court found that the composition of the party charged with infringement and the composition of the patent were "substantially identical in operation and result", "it is difficult to conceive of a case more appropriate for the application of the doctrine of equivalents."

## CONCLUSION

For the foregoing reasons, it is respectfully urged that this petition be granted.

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## APPENDIX

IN THE DISTRICT COURT OF THE UNITED STATES
THE EASTERN DISTRICT OF NORTH CAROLINA, WASHINGTON DIVISION

CIVIL—NOS. 340 & 350

Civil No. 340

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JIM BROWN HOLLIDAY and HARRINGTON MANUFACTURING COMPANY, INCORPORATED,

*Plaintiffs,*

v.

LONG MANUFACTURING COMPANY, INC.; LONG SUPPLY COMPANY, INC.; LONG TOBACCO HARVESTING COMPANY, INC.; WILLIAM R. LONG; JOHN G. LONG; JAMES O. HALL,

*Defendants.*

(Civil No. 350)

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LONG MANUFACTURING COMPANY, INC.,

*Plaintiff,*

v.

HARRINGTON MANUFACTURING COMPANY, INC.; J. J. HARRINGTON; C. B. STANFIELD; V. E. FOUNTAIN; ETHEL J. HARRINGTON; JIM BROWN HOLLIDAY,

*Defendants.*

(Filed November 30, 1956.)

**Consolidated Memorandum Opinion**

These two actions were consolidated for hearing. Both plaintiffs allege patent infringement and unfair competition in the defendants' production and sale of a tobacco harvesting machine. The same facts are at issue in both cases.

The parties consented at the trial to dismiss the defendants Long Supply Company, Inc.; John G. Long; and James O. Hall from the action brought by Holliday and Harrington Manufacturing Company, Inc. against Long Manufacturing Company, Inc., *et al.* Similarly, C. B. Stanfield, V. E. Fountain, Ethel J. Harrington, and Ethel B. Harrington were dismissed as defendants from the action by Long Manufacturing Company, Inc., against Harrington Manufacturing Company, Inc., *et al.*

Before considering the controversy presented in these consolidated cases, it will be helpful to look generally at the tobacco harvesting problem as it existed prior to 1952, when the first concrete steps toward its solution were taken by the litigant, Jim Brown Holliday.

The bright leaf, flue cured tobacco cultivated in North Carolina, Virginia, and other Southern states is grown from seed in sheltered plant beds. In spring the young plants are reset in regularly spaced rows through the fields. Fully grown plants are about five to seven feet in height. Broad tobacco leaves, from six inches to two feet long, grow directly out of the stalk, beginning a few inches above ground level and continuing at intervals to the top of the stalk.

The leaves do not mature uniformly. The whole plant cannot be harvested at one time. Bottom leaves are the earliest to ripen. Others follow progressively until the tip leaves are reached. Thus a single field may be harvested or primed from three to six times within a single season.

Ripe leaves must be selected by hand. The customary process was for pickers or primers to walk between the rows of tobacco, take the leaves ready for curing and place them in a small wagon or sled. The conveyance filled in this manner is pulled out of the field to a place where "handers" make convenient bundles of the leaves and pass the bundles by hand to "loopers", who attach them with cotton twine about the stems to a stick. The sticks, with

many bundles of tobacco leaves tied to each, are placed on racks to await removal to similar racks in a curing barn.

This traditional system of "barning" tobacco involves direct handling of the leaves by three different groups of workers, to wit, "primers", "handlers", and "loopers". Expenses to the producer resulting from high labor costs and a damaged product were excessive. The labor was arduous and slow.

In 1952, Jim Brown Holliday was farming near Jamesville, North Carolina. With the aid of a machine shop in Williamston, North Carolina, he built a high clearance, tobacco harvesting machine. Like many "firsts", Holliday's first model was a rather crude apparatus. There was a poor tobacco crop that summer. The machine was mainly used for spraying insecticides. However, Holliday's limited trials of his machine as a harvester convinced him that the basic idea was sound.

High clearance machines, in the farm implement art, are devices which roll through a field and pass over the tops of growing plants, leaving them unharmed. Such machines have long been used for such purposes as detasseling corn, spraying, and dusting crops. Never had one been made for independent use in tobacco leaf harvesting. Holliday's idea consisted of mounting on the overhead platform, racks for the tobacco sticks in a convenient location for the looper to tie the leaves as they passed up to him in clips on a conveyor chain from the primer riding beneath the platform in an adjustable seat adjacent to the tobacco and to the lower reach of the conveyor chain. The conveyor chain was hand operated.

Through the fall and winter he worked to improve his harvester. When the 1953 summer harvest season arrived, he was ready with a machine that had power driven conveyor chains. This improved version of Holliday's machine operated in the field on July 3, 1953, and was given some publicity in the nearby Williamston newspaper.

On October 9, 1953, Holliday applied for his patent. March 16, 1954, Patent No. 2,672,248 was issued to him. Meanwhile on March 5, 1954, he entered into a contract with Harrington Manufacturing Company, Inc., whereby Harrington was granted an exclusive license to manufacture harvesters under Holliday's patent. Holliday himself managed sales for Harrington. Roanoke Holliday Tobacco Harvesters appeared on the market for the 1954 harvest season.

W. R. Long, of Tarboro, North Carolina, entered the farm implement business in 1943. For some time prior to 1953 he had entertained the idea of making a tobacco harvesting machine. His first steps toward that end were taken in June of that year when he and his draftsman, W. E. Davis, launched a building program as two different harvesters.

The Davis machine featured an automatic looper or sewing head for which he later obtained a patent (No. 2,715,-968). His machine was tested July 9, 1953. Long was not satisfied with its performance and did nothing further with it.

The second machine built in Long's plant was first tried out July 13 and 14, 1953. Long and his employees ran further tests with it through July and August. Several thousand people came to a widely publicized demonstration on Labor Day, September 7, 1953. Three more such machines made by Long were displayed at the North Carolina State Fair in mid-October of that year.

Long was encouraged by the reception accorded his machines. He set up production and sales organization and equipment at substantial expense. The venture enjoyed considerable commercial success in the 1954 season and again in 1955.

The W. R. Long patent application was not made until July 28, 1954. While it was pending, an examiner at-

tempted to force Long to set up an interference with claim No. 7 of Holliday's patent, which I shall set out in full later. Upon review in the Patent Office, it was held that the examiner was not authorized to force Long into an interference. The basis of that decision was that forced interferences are available when the subject matter of a prior patent is being claimed in different language, but not when the applicant simply refuses to make any claim which conflicts with the claims of a prior patent. The decision only dealt with Patent Office procedure. It is not subject to the interpretation that a device made by Long would not infringe Holliday's patent. It merely upheld Long's privilege to decline allowing that question to be determined in the Patent Office. In this connection it may be added that lack of interference at the Patent Office is not conclusive of noninfringement. *The University of Illinois Foundation* v. *Block Drug. Co.*, 133 F. Supp. 580, and cases cited therein. Long got his patent March 15, 1955.

The first controversy presented by this case ranges around claim No. 7 of the Holliday patent, which reads as follows: "A tobacco harvester comprising a frame, wheels supporting said frame, vertical members secured to said frame in spaced relationship to each other, vertically extending conveyor chains carried by said vertical members, drive means for actuating said chains, a platform secured on top of said frame, said chains extending upwardly above said platform from there below, said chains having spring pressed clips attached thereto for resiliently engaging and carrying tobacco leaves, a plurality of seats, and means adjustably suspending said seats from said vertical members in back of said chains."

During the trial, the Court made a first hand comparison of the machine manufactured by Harrington and the one manufactured by Long. They are very nearly alike. Holliday and Harrington contend that if Holliday's claim No. 7 is accorded due scope, Long's harvester constitutes an infringement, despite the inclusion on the accused harvester

of certain unpatentable improvements. Long contends that Harrington has never manufactured a machine within the scope of Holliday's patent. He says that Harrington, with the aid of Davis and others hired from Long's company, copied the Long machine, which was proving to be a commercial success, and infringed his patent. It is also denied that his machine infringes the Holliday patent.

The device described in Holliday's claim No. 7 is clearly worthy to be designated an invention. It is not "wanting in (any) unusual or surprising consequences from the unification of the elements here concerned. . . ." *A. & P. Tea Co.* v. *Supermarket Corp.*, 340 U. S. 147 at 152. Is it, however, a pioneer invention entitled to a broad range of equivalents? I believe that it is.

In *Westinghouse* v. *Boyden Power Brake Co.*, 170 U. S. 537, at 561, the Supreme Court discussed the term "pioneer" as it is used in patent law. "This word, although used somewhat loosely, is commonly understood to denote a patent covering a function never before performed, a wholly novel device, or one of such novelty and importance as to mark a distinct step in the progress of the art, as distinguished from a mere improvement or perfection of what had gone before. Most conspicuous examples of such patents are: The one to Howe, of the sewing machine; to Morse, of the electrical telegraph; and to Bell, of the telephone."

From *Dean Rubber Mfg. Co.* v. *Killian*, 106 F. 2d, 316 at 319, I quote the following language, substituting the name of Holliday for that of Killian. "Holliday was the first to produce a machine which successfully performed the function which had been formerly done by hand, and the mechanical performance of which had been long sought by the industry, and . . . the machine of the patent is, therefore, a pioneer invention."

The key word in Holliday's claim No. 7 is "vertical". The claim calls for "vertical members", "vertically ex-

tending conveyor chains", "means adjustably suspending said seats from said vertical members". The illustrations that accompany Holliday's patent show these parts to be truly vertical. However, the scope of patent claims are not to be strictly limited to the form illustrated in drawings. *Oates* v. *Camp*, 83 F. 2d 111; *Pangborn Corp.* v. *W. W. Sly Mfg. Co.*, 284 F. 217. In neither the Long machine nor the one manufactured by Harrington are all the frame members or all stretches of the conveyor chains truly vertical. They are substantially vertical.

Long contends that Holliday's claim is limited to a harvester with chains and side members, absolutely vertical. Holliday contends that "vertical member" in claim No. 7 refers to an entire side of the frame, the whole of which is in a truly vertical plane, and that the term does not refer merely to an individual element of the frame, which, though in the vertical plane of the whole, is not individually vertical. To clarify this contention, consider the letter N. Holliday says the entire character constitutes the "vertical member", not the slanting cross-bar solely. Holliday further argues that, if "vertical member" is not construed in his favor, the word "vertical" should be interpreted, or broadened, by the doctrine of equivalents, to include "substantially vertical".

The harvester illustrated in Holliday's patent is the model that he had in operation during the summer of 1953. It was truly a "homemade" machine. Modification and streamlining were necessary before the device could be produced commercially. As was pointed out in the much cited case, *Hildreth* v. *Mastoras*, 257 U.S. 27 at 34: "It is not necessary, in order to sustain a generic patent, to show that the device is a commercial success. The machine patented may be imperfect in its operation; but if it embodies the generic principle, and works, that is, if it actually and mechanically performs, though only in a crude way, the important function by which it makes the substantial change claimed for it in the art, it is enough." I hold

that the scope of Holliday's generic, or pioneer, patent is not limited to coverage of replicas of his original embodiment of the invention.

Claims are interpreted in the light of their file-wrapper history. A narrow claim that is allowed may not be broadened to encompass the subject matter of a wider claim that has been denied by the examiner. *Exhibit Supply Co.* v. *Ace Corp.*, 315 U. S. 126; *Schriber-Schroth Co.* v. *Cleveland Trust Co.*, 311 U. S. 211; *Smith* v. *Florence-Mayo Nuway Co.*, 182 F. 2d, 507. Holliday's history in the Patent Office indicates that he was under no compulsion to word his claim as it was done. "Vertical" was a random adjective chosen to describe the then existing form of the tobacco harvester. This is not a design patent. Form is not the essence of Holliday's invention. Form bears no more than an incidental relationship to the function that the device is designed to perform.

In *Specialty Equipment & Mach. Corp.* v. *Zell Motor Car Co.*, 193 F. 2d 513, the Court of Appeals for this Circuit had occasion to review at some length the doctrine of equivalents. The following language is from that opinion, page 518: "Very pertinent here with respect to the application of the doctrine of equivalents on the issue of infringement is the statement of the rule contained in *Union Paper Bag Machine Co.* v. *Murphy*, 97 U. S. 120, 125, as follows: " 'Except where form is of the essence of the invention, it has but little weight in the decision of such an issue, the correct rule being that, in determining the question of infringement, the court or jury, as the case may be, are not to judge about similarities or differences by the names of things, but are to look at the machines or their several devices or elements in the light of what they do, or what office or function they perform, and how they perform it, and to find that one thing is substantially the same as another, if it performs substantially the same function in substantially the same way to obtain the same result, always bearing in mind that devices in a patented

machine are different in the sense of the patent law when they perform different functions or in a different way, or produce a substantially different result.

" 'Nor is it safe to give much heed to the fact that the corresponding device in two machines organized to accomplish the same result is different in shape or form the one from the other, as it is necessary in every such investigation to look at the mode of operation or the way the device works, and at the result, as well as at the means by which the result is attained . . .

" 'Authorities concur that the substantial equivalent of a thing, in the sence of the patent law, is the same as the thing itself; so that if two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form, or shape. Curtis, Patents, 4th Ed., Sec. 310.' "

*Graver Tank Mfg. Co.* v. *Linde Air Products Co.*, 339 U. S. 605, presents a Supreme Court consideration of the doctrine of equivalents in which the foundation of the doctrine is repeated as being that one may not practice a fraud on a patent. The invention at stake was a formula for a flux used in welding. The accused substance substituted for a chemical named in the formula of the patentee's claim, a chemical from a different chemical group, which in combination with the patentee's other ingredients, produced the same reaction as that obtained with the patentee's complete formula.

The Court upheld the District Court's finding of equivalence in the accused formula and included the following language at page 609. "What constitutes equivalency must be determined against the context of the patent, the prior art, and the particular circumstances of the case. Equivalence, in the patent law is not the prisoner of a formula and is not an absolute to be considered in a vacuum. It does not reqnire complete identity for every purpose and

in every respect. In determining equivalents, things equal to the same thing may not be equal to each other and, by the same token, things for most purposes different may sometimes be equivalents. Consideration must be given to the purpose for which an ingredient is used in a patent, the qualities it has when combined with the other ingredients, and the function which it is intended to perform. An important factor is whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was."

I have already pointed out the context in which "vertical" was used in Holliday's patent. I have already undertaken to show that his invention was a pioneer in the field. I now propose to consider the functional purposes served by the "vertical" elements in Holliday's device and the interchangeability of those elements that would have been perceived by a reasonably skilled person in the farm implement art.

In Holliday's illustrated machine and in the machines manufactured by Harrington and Long, primers are carried beneath a platform that passes over the top of the tobacco plants. Conveyor chains and members attached to the frame connect the upper and lower levels of the harvesters. The frame members and chains necessarily extend in an upward, downward direction, since they serve to connect a higher and lower plane. It is of no consequence to the maintenance of this connection that it varies from a true 90 degree vertical. No advantage is derived from the variation.

Holliday and Harrington aptly point out in their brief that: "There is one point in the travel of the tobacco-carrying chains where it is desirable that the chains travel in a substantially vertical direction, using vertical in the restricted sense. This is the place in front of where the primer or picker sits. When it is realized that the seat on which the picker sits can be moved up and down over

a distance of some three or four feet, it can be seen why it is desirable that the chain in front of him be moving substantially in a specifically vertical direction in order that he not be moved either toward or away from the chain when the position of his seat is altered in an upward or downward direction. In this sense, there is a reason for a portion of the chain to move in a specifically vertical direction. An inspection of the Long patent shows that this portion of the chain in the Long machine also moves in a specifically vertical direction, for exactly the same reason. The most recent model of the Long machine has long stretches of vertical chains, and also vertical seat supports."

The quibble in this case over the word "vertical" brings to mind the Supreme Court's disposition of a similar contention regaring the word "parallel" found in *Elizabeth* v. *Pavement Co.*, 97 U. S. 126 at 138. "It is objected, that the blocks of the Elizabeth pavement have not parallel sides, as prescribed in Nicholson's patent, by reason of the notch or groove in the side, into which the strips are fitted; but this notch or groove does not take from the blocks their general conformity to the requisition of the patent."

Turning now from Holliday's patent, let us consider the alleged infringement of Long's patent. Holliday and Harrington insist that Long's patent is completely void by reason of Title 35, U. S. C. A., Sec. 102, which proscribes the issuance of a patent for an invention that has been in public use more than one year before the patent application date. As I indicated earlier, I do not find that the evidence lends any support to the theory that the use of Long's harvester between July 14 and July 28, 1953, was, in any sense, other than experimental.

The part of Long's patent alleged to be infringed is that which calls for "a conveyor . . . having a substantially horizontal run of substantial extent above said platform

to facilitate removal of leaves from said conveyor, a series of clips carried by said conveyor for receiving leaves to be conveyed, each clip being pivotally mounted so that it will be disposed in substantially the same angular position on the run where they are removed therefrom, . . ." A horizontal run of the conveyor chain and pivotal clips are not found in Holliday's patent. Long's harvester and the type made by Harrington have pivotal clips. Harrington extended the chain in a zig-zag manner. Also merely horizontal.

I do not agree with Holliday and Harrington that Long's pivotal clips and chain arrangement are "mere structural changes which involve nothing more than the exercise of the skill of the art (and) do not rise to the dignity of invention". *Thompson* v. *American Tobacco Co.*, 174 F. 2d, 773, 777. They added a decided advantage to the operation of the harvesters in which they were incorporated. The two improvements, in combination, serve to give the looper more time to remove the tobacco from the chain.

And in addition to this is the presumption arising from the imitation of the patented article by the manufacturer of the alleged infringing device. As to this, we agree with what was said by Judge Hough, speaking for the Circuit Court of Appeals of the Second Circuit in *Kurtz* v. *Belle Hat Lining Co.*, 280 F. 277, 281: " 'The imitation of a thing patented by a defendant, who denies invention, has often been regarded, perhaps especially in this circuit, as conclusive evidence of what the defendant thinks of the patent, and persuasive of what the rest of the world ought to think.' " *Black & Decker Mfg. Co.* v. *Baltimore Truck Tire Serv. Corp.*, 40 F. 2d, 910, 914. See also *Ackerman's* v. *General Motors*, 202 F. 2d, 642. Long's patent is not invalid for want of invention.

However, it is only a patent for improvements on Holliday's pioneer invention. An improvements patent is accorded only a narrow range of equivalents. Its scope is

limited substantially to the devices disclosed in the specifications and drawings. *Westinghouse Electric Corp.* v. *Bulldog Elec. Prod. Co.,* 106 F. Supp. 819, 870, and cases cited therein. But, to avoid infringement of a patent with even this narrow scope, the accused device must amount to more than merely a colorable departure from the invention. *Sanitary Refrigerator Co.* v. *Winters,* 280 U. S. 30.

The Harrington imitation of Long's improvements cannot escape the accusation of infringement even under this easy test. The attempt made to "get off" Long's patent by altering the extended horizontal run of the chain from a straight line to a zig-zag line constitutes no more than an ineffectual subterfuge, ineffectual to add any advantage over Long's improvement, ineffectual to prevent a clear reading of the device on Long's claim. The pivotal clips are virtually indistinguishable. The finding that Harrington infringed Long's patent on these devices is further bolstered by substantial evidence of Harrington's hiring Davis and other employees from Long.

The monopoly of a pioneer patent and the monopoly of an improvement patent are mutually exclusive. *Binney & Smith Co.* v. *United Carbon Co.,* 125 F. 2d, 255. The making of patentable improvements does not avoid infringement. *Acme Steel Company* v. *Eastern Venetian Blind Company,* 130 F. Supp. 459. The improver is liable as an infringer if he appropriates the basic invention without license. *Temco Company* v. *Apco Company,* 275 U. S. 319. "Two patents may both be valid when the second is an improvement on the first, in which event, if the second includes the first, neither of the two patentees can lawfully use the invention of the other without the other's consent." *Cantrell* v. *Wallick,* 117 U. S. 689, 694, as quoted in *Wine Railway Appliance Co.* v. *Baltimore & O. R. Co.,* 78 F. 2d, 312, 316.

In accord with the foregoing opinion, the defendants Long Manufacturing Company, Long Tobacco Harvesting Company, and W. R. Long will be enjoined from commit-

ting further acts of infringement of Holliday's patent No. 2,672,248. Long Manufacturing Company, which produced the infringing harvesters, and Long Tobacco Harvesting Company, the sales outlet, will be liable for damages to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by these infringers. An accounting shall be made to aid in determining the amount of damages due.

It does not appear from the evidence that the defendant W. R. Long, though the principal owner of the defendant corporations, was merely using the corporations as a fraudulent cloak to carry on the infringement of other's patents; nor was his activity in connection with the plaintiff's patent carried on beyond the scope of his authority as a corporate officer. He is not personally liable to Harrington or Holliday for damages.

Similarly, Harrington Manufacturing Company, J. J. Harrington, and Jim Brown Holliday will be enjoined from committing further acts of infringement of Long's patent No. 2,704,158. Harrington Manufacturing Company will be liable for damages to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by this infringer. An accounting shall be made to aid in determining the amount of these damages also.

J. J. Harrington is exempted from personal liability on the basis of his relationship with Harrington Manufacturing Company and with the infringement, which relationship I find to be parallel to that held by Long.

I find for neither plaintiff a flagrant, willful infringement that justifies increased damages. In addition to so finding, I deny increased damages as a matter of discretion.

Neither plaintiff may recover attorney fees.

Each party shall bear its own costs.

(S.) Don Gilliam,
*United States District Judge.*

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT.

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No. 7383.

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LONG MANUFACTURING COMPANY, INC., LONG TOBACCO HARVESTING COMPANY, INC., AND W. R. LONG, *Appellants*,

v.

JIM BROWN HOLLIDAY AND HARRINGTON MANUFACTURING COMPANY, INC., *Appellees*.

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No. 7384.

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HARRINGTON MANUFACTURING COMPANY, INC., J. J. HARRINGTON, AND JIM BROWN HOLLIDAY, *Appellants*,

v.

LONG MANUFACTURING COMPANY, INC., *Appellee*.

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APPEALS FROM THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF NORTH CAROLINA, AT WASHINGTON.

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(Argued April 11, 1957. Decided May 27, 1957.)

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Before PARKER, Chief Judge, and SOBELOFF and HAYNSWORTH, Circuit Judges.

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A. Yates Dowell and A Yates Dowell, Jr., (Henry C. Bourne on brief) for Appellants in No. 7383 and Appellee in No. 7384, and Robert F. Davis (John H. Lewis, Jr., Harvey B. Jacobson, J. A. Pritchett and H. Vinson Bridgers on brief) for Appellees in No. 7383 and Appellants in No. 7384.

HAYNSWORTH, Circuit Judge:

The parties in these two cases, involving interrelated factual situations, are, together with their associates and licensees, owners of two separate patents issued on tobacco harvesters. Their conflicting interests led to the institution of these two actions in which each patentee maintains that his patent is valid and infringed by the other patentee and his licensee.

The two cases were consolidated for trial after which the District Court held that the device of the Holliday patent No. 2,672,248 issued March 16, 1954, was a generic or pioneer invention entitled to a wide range of equivalents while the device of the Long patent No. 2,704,158 issued March 15, 1955, embodied certain patentable improvements. Since the machine actually manufactured and sold by each is substantially that disclosed in the Long patent, it was held that Long and his accociates had infringed the valid Holliday patent and that Holliday and his licensee had infringed Long's valid improvement patent. It was the judgment of the District Court that each of the patentees should have injunctive relief and compensatory damages from the other.

The defendants in each case have appealed to this Court.

The bright leaf tobacco grown in the Carolinas and Virginia is a plant consisting of a single stalk, which at maturity may be from five to seven feet in height. At intervals, broad tobacco leaves, from six to twenty-four inches in length, grow directly from the stalk.

The leaves do not ripen uniformly. Those nearest the ground are the first to ripen while those at the top of the stalk are the last. It is necessary, therefore, to have successive harvestings of the same field. The lower, ripened leaves are selected and picked by hand, while the higher unripened leaves are left to ripen for later harvestings.

The commonly accepted method of harvesting and stacking such tobacco, prior to 1953, was entirely a hand operation. Pickers, or "primers," would walk through a field,

selecting and picking the ripe leaves which they placed upon a cart or sled. When filled with leaves, this conveyance was taken out of the field where "handers" arranged the leaves in convenient bundles and passed the bundles to "loopers" who tied the bundles to a stick. Many such bundles were attached to each stick until a filled stick was placed in a rack from whence it was removed to the curing barn where it was again placed on racks.

Throughout the broad field of agriculture, the rising cost of farm labor, coupled with acreage restrictions, has made such manual operations more and more uneconomic and has resulted in a rapidly accelerating mechanization of agriculture.

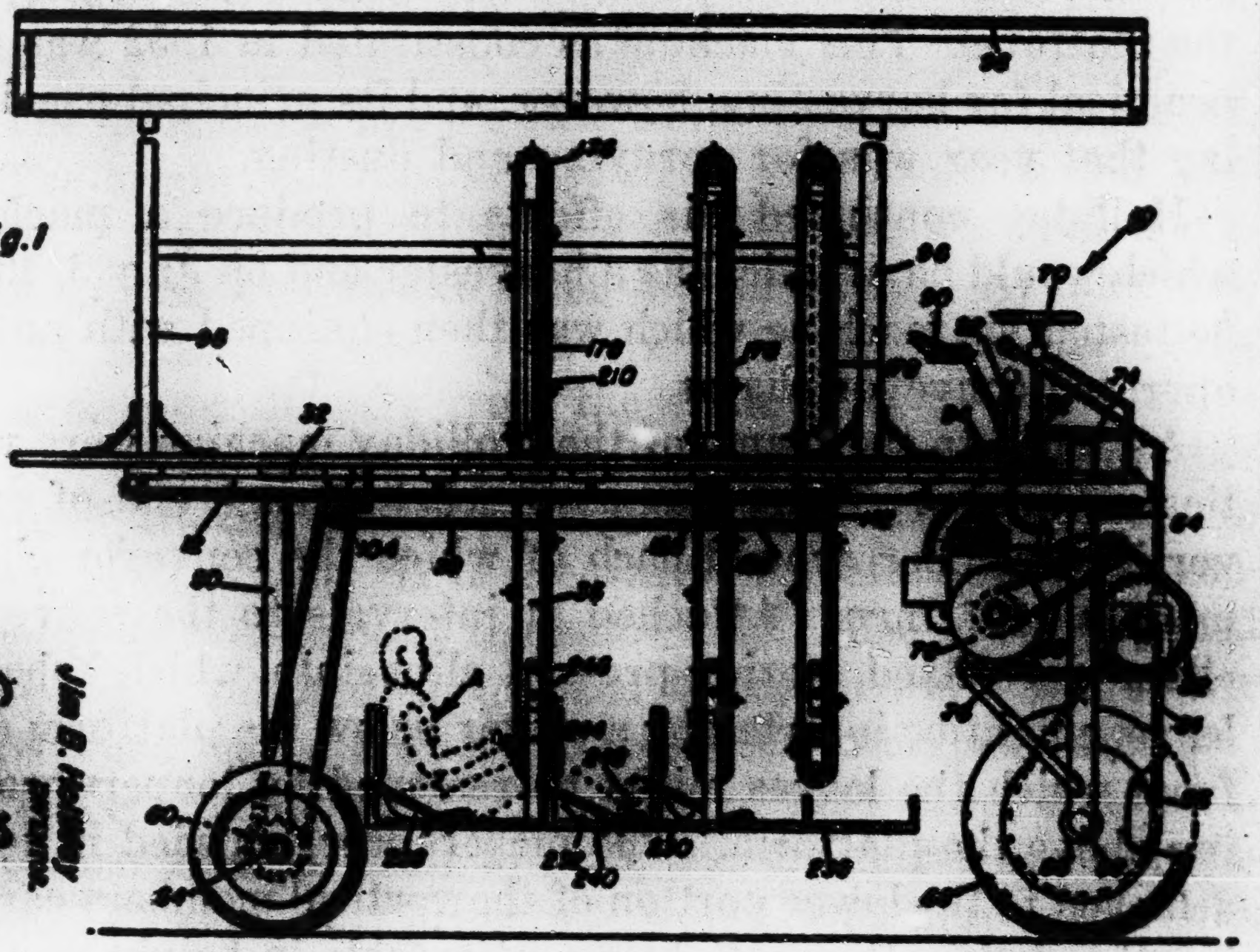
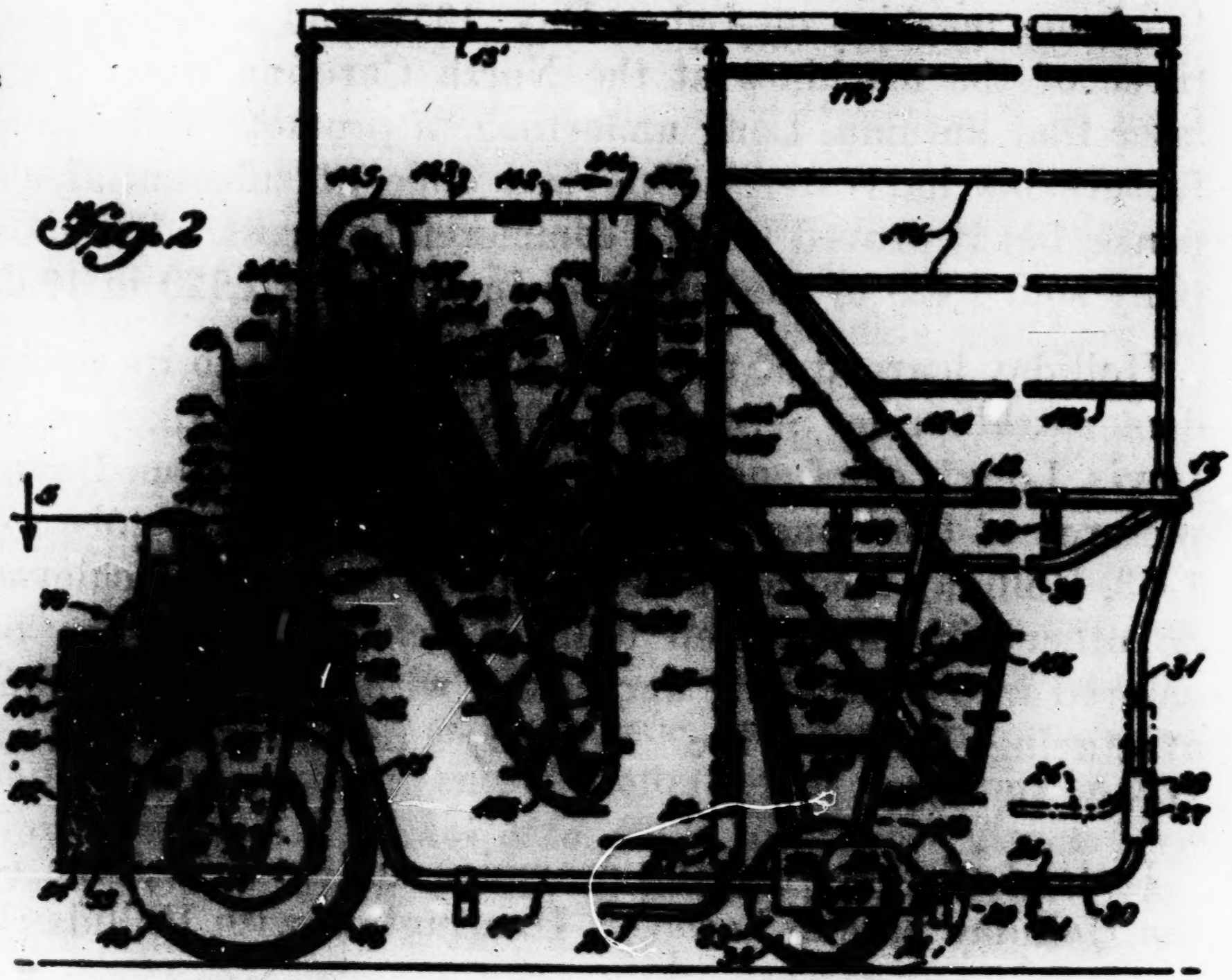
Tobacco farmers were not unconscious of these pressures and Holliday and Long, apparently entirely independently, each conceived the idea of a mechanical tobacco harvester.

In 1952 Holliday constructed a crude high clearance machine having a platform above the height of mature tobacco plants and equipped with hand operated conveyor chains by which tobacco leaves might be passed from pickers on seats below the platform to "loopers" working on the platform. This machine as constituted in 1952 was not practical for harvesting, however, and its principal use during that year was for spraying and dusting.

Holliday continued his efforts to produce a machine which would be practical as a harvester and on July 3, 1953, he tested his machine which was then equipped with power operated conveyor chains.

Attached to the frame of the Holliday machine were vertical members. There was a sprocket at each end of each vertical member around each of which the conveyor chain made a 180° turn. Attached at intervals to the conveyor chain were fixed, spring-pressed clips into which tobacco leaves might be inserted by a picker below the platform and from which the leaves might be removed by loopers working above the platform. The pickers were carried in seats attached to the lower portion of the vertical members carrying the chains, the seats being adjustable in height so that

Fig. 1

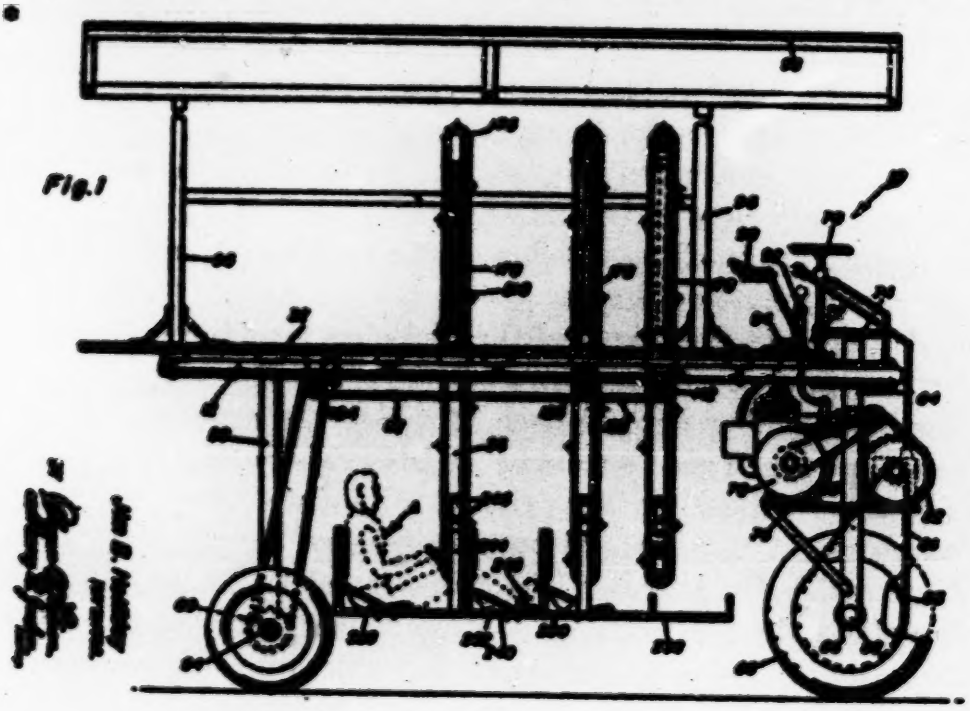


throughout the harvesting season, the picker would be within convenient reach of the ripened leaves.

This was the machine of the Holliday Patent No. 2,672,248. It is shown in the margin in a diagramatic drawing, *, and is fairly described in claim No. 7, the only claim of that patent involved in this controversy:

> "A tobacco harvester comprising a frame, wheels supporting said frame, vertical members secured to said frame in spaced relationship to each other, vertically extending conveyor chains carried by said vertical members, drive means for actuating said chains, a platform secured on top of said frame, said chains extending upwardly above said platform from therebelow, said chains having spring pressed clips attached thereto for resiliently engaging and carrying tobacco leaves, a plurality of seats, and means adjustably suspending said seats from said vertical members in back of said chains."

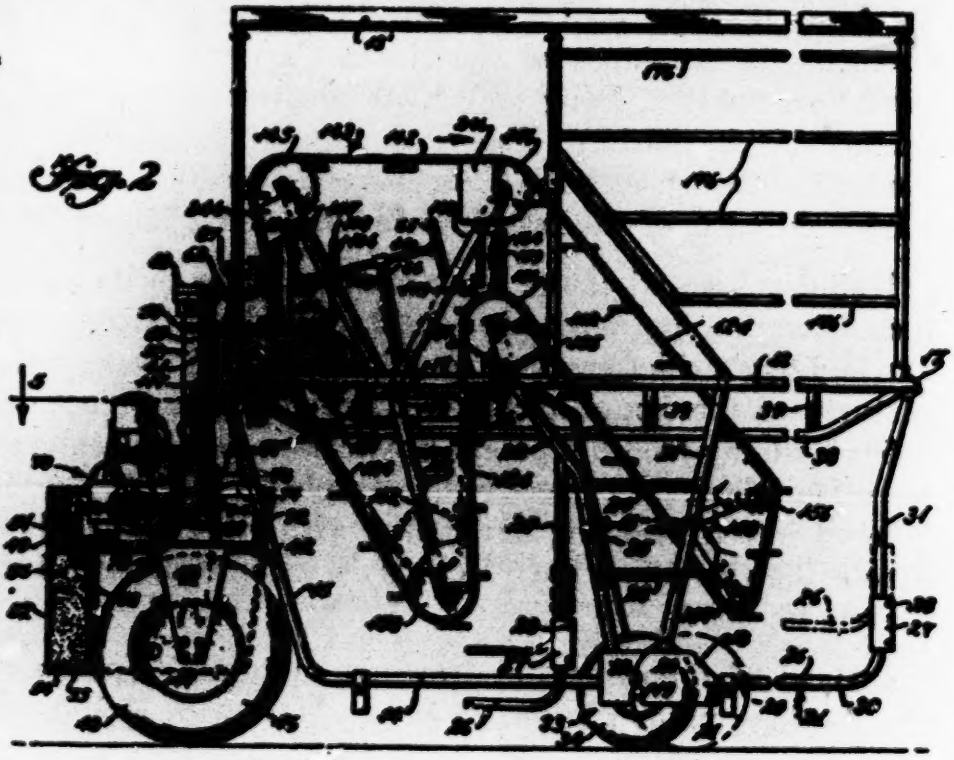
The Holliday machine had certain practical deficiencies. The comparatively short vertical run of the conveyor chain



above the platform did not permit loopers on the platform to keep pace with the pickers below. Leaves which were not removed on the rising run of the chain, being held in fixed clips, were inverted when they passed over the upper sprocket with resultant damage to the leaves.

Meanwhile, quite independently, Long had been working to produce a machine which would accomplish the same result sought by Holliday. Long was a manufacturer of farm implements, and he and his chief engineer, one Davis, worked concurrently upon two different approaches to the problem.

Long's approach, and the one ultimately adopted, was, as Holliday's, a high clearance, three wheeled, motorized machine, shown in a diagramatic drawing in the margin. * * As in Holliday, loopers worked from the high level platform where they removed from the conveyor, bundled and stacked tobacco leaves which had been picked by pickers who were carried in seats, adjustable in height, below the



platform. Each conveyor chain, unlike Holliday, however, ran over seven sprockets, affixed to a variety of members. These sprockets carried each chain in front of each of two pickers below the platform and provided it with a substantially horizontal run above the platform in the work space of the loopers. Attached to the chain were spring-pressed clips, pivotally mounted so that the tobacco leaves would hang downward at every point in the run of the conveyor. The adjustable seats for the pickers were affixed to members of the frame having no direct connection with other members carrying the sprockets of the conveyor system.

An essential element of each claim of the Long patent is the combination of a conveyor chain having "a substantially horizontal run of substantial extent" above the platform and pivotally mounted clips to carry the leaves of tobacco.

Long's machine was first tested in the field on July 13, 1953, ten days after Holliday's first test of his machine.

After a public demonstration of an improved version of the Long machine on Labor Day, 1953, and a showing of three of the machines at the North Carolina State Fair later that autumn, Long undertook to promote and manufacture his harvester. This was done at substantial expense, but it proved to be a commercial success. His company sold 1,429 of the machines in 1954 and 2,120 in 1955.

Holliday learned of the Long machine prior to its public demonstration in September 1953. He had talked with Davis, Long's chief engineer, and had obtained from Davis, pictures of the Long machine. Thereafter, on October 9, 1953, Holliday filed his patent application, but he achieved no other significant step until March 5, 1954, when he entered into a licensing agreement with Harrington Manufacturing Company, Inc. Holliday's patent was issued on March 16, 1954.

Instead of following the drawings and specifications of the Holliday patent, however, Harrington, with Holliday's

assistance, proceeded to manufacture machines which, substantively, were literal copies of Long's machine. Subsequently, Harrington employed Long's former chief engineer, Davis, in connection with that and other work.

In 1954 Harrington manufactured approximately 60 harvesters and in 1955 approximately 1,050, all being substantially identical to Long's machine.

The parties, in argument in this Court, do not seriously question that each of the patented devices involved some novelty amounting to invention. Long's principal contention is that his machine does not infringe the Holliday patent while Holliday contends that the Long patent is invalid because of claimed public use of the Long machine more than one year prior to the date of Long's patent application.

Claim 7 of the Holliday patent provides for vertical members, secured to a frame, vertically extending conveyor chains carried by the vertical members and with means for adjustably suspending seats from the vertical members.

We are asked to construe the word "vertical" as used in Holliday's claim as a "random adjective" implying no more than the functional purpose of the conveyor to elevate material from one level to another, and the term "vertical member" as syonymous with all of the side members of the Long machine which, in the aggregate, happen to be in a substantially vertical plane. But Holliday's contribution, in the light of the prior art, does not warrant such liberal construction of the language of his claim.

An inventor has a right to define specific terms as used in a patent, and, while the drawings and specifications may not enlarge the scope of the claims, they may be considered in determining the inventor's definition of the terms he employed. *Black & Decker Mfg. Co.* v. *Baltimore Truck Tire Service Corporation*, 4 Cir., 40 F (2d) 910; *Hutzler Bros. Co.* v. *Sales Affiliates, Inc.*, 4 Cir., 164 F (2d) 260; *City of Grafton* v. *Otis Elevator Co.*, 4 Cir., 166 F (2d) 816.

Should there be any doubt from the language of claim 7 that Holliday used the terms "frame" and "vertical member" in contradistinction to each other, it is clear from the drawings and specifications that he did. He showed in his drawings and described in his specifications "vertical members," carrying the conveyor chains and adjustable seats, which are not an integral part of the frame but are merely "welded or otherwise secured to the transverse members" of the frame.

The Long machine, as any box-like structure, has combinations of members through which, in a geometric sense, vertical planes may be passed. It does not have "vertical members" in the sense that term is employed in the Holliday patent. The literal language of claim 7 of the Holliday patent cannot be read directly on the Long machine.

An examination of the prior art convinces us that Holliday's machine was not a pioneer invention and that the restrictive language of the claim was employed advisedly in order to avoid the prior art.

As the District Court found, "high clearance machines, in the farm implement art" designed to pass over the tops of growing plants "have long been used for such purposes as detasseling corn, spraying and dusting crops." They were also known and used for harvesting.

In 1918 patent No. 1,275,781 was issued to Stark et al, for a high clearance cotton harvester. Seats were provided for the pickers and there was a conveyor to carry the cotton to the upper level of the machine. The seats were not adjustable in height and the conveyor was not truly vertical.

In 1950 patent No. 2,518,965 was issued to Whitley for a high clearance tobacco harvester. Seats for the pickers were adjustable in height. There was, however, no mechanical conveyor system. The tobacco leaves were passed by hand from the pickers below to the lopers above the platform.

In 1955 patent No. 2,702,134 was issued to Alphin, upon an application filed in 1952, for a toba co harvester having a conveyor belt to carry the leaves from the pickers in seats near the ground to loopers riding on a high clearance platform. The seats for the pickers were not adjustable in height and the machine was subject to the practical disadvantage of being propelled by a conventional tractor rather than a single motorized wheel. Holliday had seen a picture of the Alphin machine and knew of it when he was working upon his own.

What Holliday did, therefore, was to combine the well-known high clearance self-propelled platform with adjustable seats for the pickers as shown in the Whitley patent and to substitute a vertical chain conveyor with fixed, spring-pressed clips for the inclined conveyor belts of the Alphin and Stark patents.

While Holliday's machine may not have been wanting in invention, it was not the first mechanical harvester with mechanical means for elevating material from a lower level to workers on a high clearance platform, nor even the first specifically designed for harvesting tobacco. It was a combination of known elements and it was subject to practical deficiencies, mentioned above, of such consequence that it was never commercially produced.

The limited contribution of the Holliday machines does not warrant the broad construction urged upon us. To adopt it would extend the language of the claim far beyond the apparent intention of the inventor and raise grave doubt of the validity of this claim of the patent in the light of the prior art. Against the background of earlier use of conveyor systems in mechanical, high clearance harvesters, Holliday could not have claimed the use of conveyors for the function of elevating tobacco leaves. Quite properly he restricted his claim to the particular conveyor system disclosed by him. The restricted language of his claim, describing his conveyor system, should not now be expanded

to preclude the use of other conveyor systems of substantially different design and arrangement.

Assuming that the Holliday machine involved patentable invention, his patent is entitled to a reasonable range of equivalents. In determining the extent of the range of equivalents, however, we must consider the state of the prior art, the novelty and contribution of the claimed invention, the nature and extent of the differences between the patented and the accused devices, the scope of the claim of the patent and the limitations inherent in it and other surrounding circumstances. *Graver Tank & Mfg. Co.* v *Linde Air Products Co.*, 339 U. S. 605, 70 S. Ct. 854, 94 L. Ed. 1097. Protection of a patent is not to be denied because of inconsequential differences, nor should one be allowed to work a fraud upon a patent by the substitution of obvious equivalents which serve no useful purpose. *Graver Tank & Mfg. Co.* v. *Linde Air Products Co.*, supra; *Black & Decker Mfg. Co.* v. *Baltimore Truck Tire Service Corp.*, 4 Cir., 40 F (2d) 910; *Saco-Lowell Shops* v. *Reynolds*, 4 Cir., 141 F (2d) 587; *Wine Ry. Appliance Co.* v. *Baltimore & O. R. Co.*, 4 Cir., 78 F (2d) 312. On the other hand, restricted claims and narrow combination or paper patents should not be so expanded as to preempt an entire generic field. *Harford A. & B. Assn.* v. *Puett Electric Starting Gate Corp.*, 4 Cir., 182 F (2d) 608; *Wheeling Stamping Co.* v. *Standard Cap & Molding Co.*, 4 Cir., 155 F (2d) 6; *Scott & Williams, Inc.* v. *Whisnant*, 4 Cir., 126 F (2d) 19.

Construing Holliday's claim as we do, its range of equivalents, in the light of the prior art, is, at most, comparatively narrow.

The "vertical members" specified in Holliday's claim are not found in Long's machine. The frames of the two machines are clearly equivalent, but portions of the frame of Long's are not the equivalent of the conveyor system of the Holliday device or of Holliday's "vertical members," which are the heart of his conveyor system.

We conclude that the Long machine does not infringe claim 7 of the Holliday patent.

In reaching this conclusion, we are mindful that Holliday and Long were working independently and contemporaneously. The record does not disclose that Long even knew of Holliday's work, or that he pirated anything from Holliday. The record is clear that Long's machine was not subject to the deficiencies of the device of the Holliday patent, that it met with immediate commercial success and that it was promptly copied by Holliday and his licensee.

It is true, of course, that one who merely improves the device of a basic patent may not appropriate to himself all of the rights of the basic patentee, but we should be reluctant to so extend a narrow and specific claim as to protect the copyist from the effective innovator.

We agree with the District Court that the machine of Long's patent No. 2,704,158 involved patentable invention. As indicated earlier, it combined, in a different way, the same known elements used by Holliday. The differences, however, were significant. The provision for a "substantially horizontal run of substantial extent" of the conveyor above the platform and the use of pivotally mounted clips overcame the deficiencies of the Holliday machine and resulted in the first really practicable tobacco harvester. It was the first to achieve commercial success, and it was promptly copied by Holliday and his licensee, Harrington.

These are all indicia of invention in a field in which others were conscious of the problem and had sought, without success, to solve it.

While many of the machines manufactured by Harrington were literal copies of the Long machine, others incorporated a variant which was introduced to avoid the claims of the Long patent. This variant was the introduction of three additional sprockets during the course of the extended horizontal run of the conveyor above the platform.

These sprockets converted the substantially horizontal run of the conveyor above the platform from a straight line to a series of zigzags. The terminal sprockets above the platform were at substantially the same elevation, however, and the overall course of the zigzags was horizontal.

We agree with the finding of the District Court that the zigzags added nothing to the performance or function of the machine and were ineffectual to avoid Long's claim to a "substantially horizontal run."

Holliday and Harrington, in Long's suit, while setting up the usual defenses of invalidity for lack of invention and non-infringement, rely principally upon the claim that Long's machine was in public use more than one year prior to the filing of his patent application.

Long's machine was first tested on July 13, 1953. It was apparent in this test that the pickers could not keep the loopers busy so he modified the conveyor system to add two more pickers. This modification was accomplished that evening and the machine was again tested in the field on July 14, 1953. Long testified the machine performed very satisfactorily on the 14th.

During the following weeks it was used in the harvesting of tobacco in fields owned by Long's father and once in the field of a neighbor.

Long characterized these uses as experimental or tests and there is nothing in the record to indicate that Long derived any financial gain from them or that they approached a start of commercial exploitation.

Holliday, whose licensee now questions Long's use, had testified that he had felt it necessary to test his machine throughout the harvesting season to be certain it would operate in the same manner when pulling leaves near the top of the stalk as it did early in the season when the ripened leaves were close to the ground.

Long testified that his "tests," during the summer of 1953, resulted in a number of changes. He changed the brakes from the front to the rear wheels to give the machine greater stability. He redesigned the auxiliary power system to avoid its sucking in tobacco leaves. Finally, he replaced his pivotally mounted weighted clips with L-shaped clips, similarly mounted, because the weights interfered with the leaves passing over them.

The record indicates that perhaps all of Long's use of his machine prior to his advertised "public demonstration" on September 7, 1953 was experimental. Certainly, we find no reason to disagree with the finding of the District Court that the use prior to July 28, 1953, the critical date under the provisions of the statute, 35 U.S.C. 102 (b), was anything other than experimental. Long's expression of satisfaction with the operation of the machine on July 14th is not inconsistent with a recognition of the necessity of further testing and experimentation, particularly when the record affirmatively shows that further testing and experimentation was conducted.

Ever since *Elizabeth* v. *American Nicholson Pavement Co.*, 97 U. S. 126, 24 L. Ed. 1000, it has been clear that necessary testing and experimentation by the inventor for a not unreasonable period of time is not a public use within the meaning of Section 102 (b) of the Act.

On abundant evidence it has been found here that the inventor's use during the critical period was experimental only and did not constitute a public use. See: *Smith & Griggs Mfg. Co.* v. *Sprague*, 123 U. S. 249, 8 S. Ct. 112, 31 L. Ed. 141; *Cline Electric Mfg. Co.* v. *Kohler*, 7 Cir., 27 F. 638; *General Electric Co.* v. *Minneapolis-Honeywell Regulator Co.*, 2 Cir., 118 F. (2d) 278; *Picard* v. *United Aircraft Co.*, 2 Cir., 128 F. (2d) 632; *Metallizing Engineering Co.* v. *Kenyon Bearing & Auto Parts Co.*, 2 Cir., 153 F. (2d) 516; *Merrill* v. *Builders Ornamental Iron Co.*, 10 Cir., 197 F. (2d) 16; *Lyon* v. *Bausch & Lomb Optical Co.*, 2 Cir., 224 F. (2d) 530, affg. 119 F. Supp. 42.

A much longer period than the two weeks that were involved could hardly be regarded as excessive for testing the function and utility of a rather complicated machine, newly conceived and newly constructed and for experimentation looking toward essential changes and adjustments.

The judgment of the District Court in case No. 7383 is reversed and the cause remanded for the entry of final judgment for the appellants, Long Manufacturing Co., et al.

The judgment of the District Court in case No. 7384 is affirmed and the cause remanded for the assessment of compensatory damages and further proceedings in accordance with that judgment.

Case No. 7383, *Reversed and Remanded*

Case No. 7384, *Affirmed*

**Decree**

Filed and Entered May 27, 1957.

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 7383.

LONG MANUFACTURING COMPANY, INC., LONG TOBACCO HARVESTING COMPANY, INC., and W. R. LONG, *Appellants,*

vs.

JIM BROWN HOLLIDAY and HARRINGTON MANUFACTURING COMPANY, INC., *Appellees.*

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APPEAL FROM the United States District Court for the Eastern District of North Carolina.

THIS CAUSE came on to be heard on the record from the United States District Court for the Eastern District of North Carolina, and was argued by counsel.

ON CONSIDERATION WHEREOF, It is now here ordered, adjudged and decreed by this Court that the judgment of the said District Court appealed from, in this cause, be, and the same is hereby, reversed with costs; and that this cause be, and the same is hereby, remanded to the United States District Court for the eastern District of North Carolina, at Washington, with direction to enter final judgment for the appellants in accordance with the opinion of the Court filed herein.

May 27, 1957.

CLEMENT F. HAYNSWORTH, JR.
*United States Circuit Judge.*

June 19, 1957, petition of appellees for extension of time to file petition for rehearing filed.